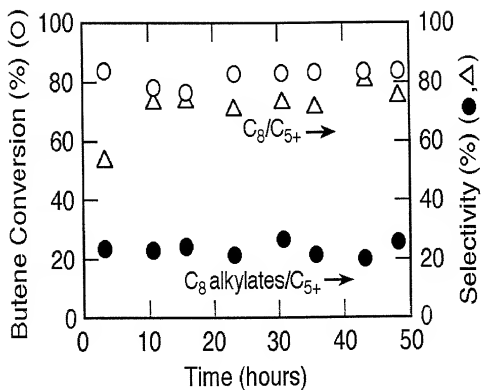
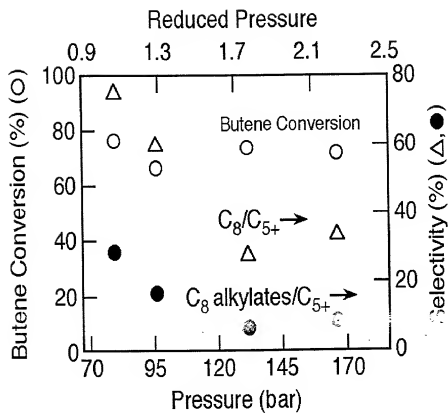


Figure 1



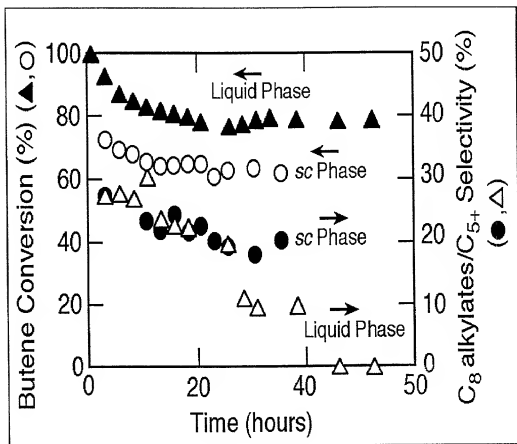
Steady alkylation activity on SAC-13 catalyst. 80 bar, 368 K, 0.05 h^{-1} OSV, I/O=5, CO_2 = 70 mole %.

Figure 2



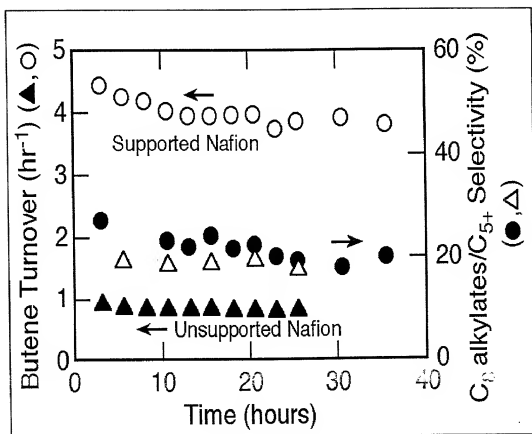
Pressure tuning effect on alkylation activity. 368 K, $I/O=5$, 0.05 h^{-1}

Figure 3



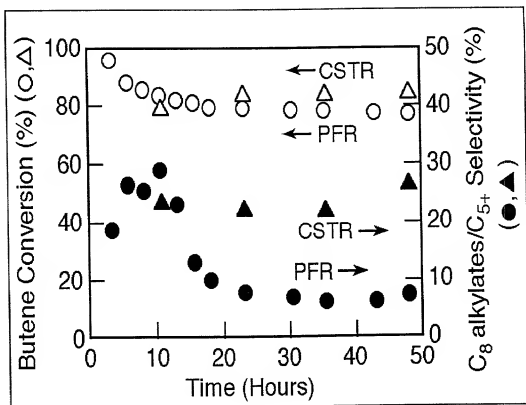
Liquid (26 bar) vs. supercritical phase alkylation (95 bar, 70 mole% CO₂) on SAC-13. 368 K, 0.05 h⁻¹ OSV, I/O=10.

Figure 4



Supported (SAC-13) vs. unsupported Nafion® catalysts. 80 bar, 368 K, 0.05 h^{-1} OSV, $\text{I/O}=5$, 70 mole% CO_2 .

Figure 5



Effect of reactor configuration. 97 bar, 368 K, 0.05 h⁻¹ OSV, I/O=10

Figure 6

Isobutane/1-butene alkylation in sc-CO₂ at 368 K over SiO₂-supported Nafion[®] with periodic regeneration by CO₂ at 155 bar.

Butene conversion (■), C₈ selectivity (◇), and C₁₂ selectivity (●)

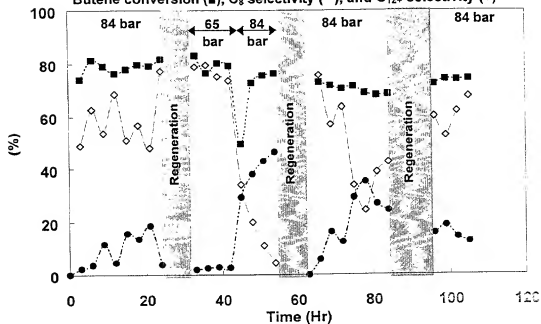


Figure 7

Isobutane/1-butene alkylation in sc-CO₂ at 368 K
 over SiO₂-supported Nafion® at 78 bar.
 Butene conversion (■), C₈ selectivity (◇), and C₁₂₊ selectivity (●)

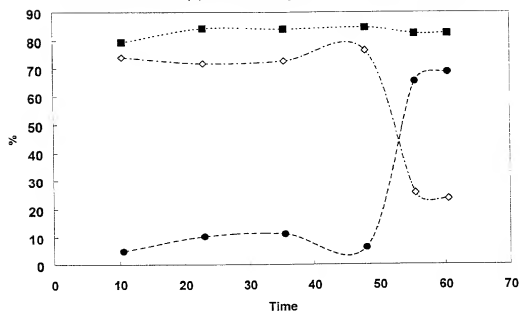


Figure 8

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Isobutane/1-butene alkylation in sc-CO₂ at 368 K over SiO₂-supported Nafion®.
Butene conversion (■), C₈ selectivity (◇), and C₁₂₊ selectivity (●)

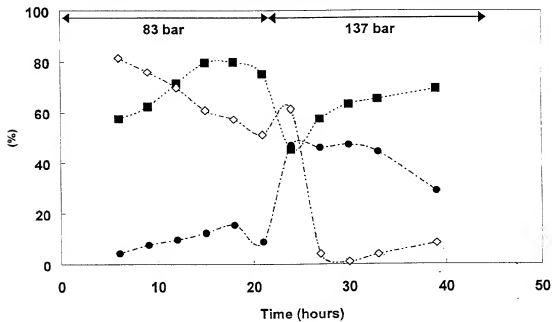


Figure 9

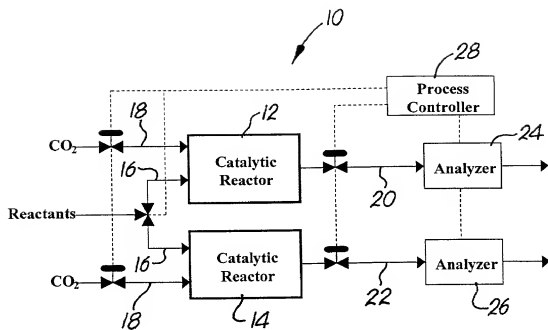


Figure 10